

Attorney Docket No.  
UBAT1300

Serial No. 09/671,636  
Customer ID: 25094

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**IN THE CLAIMS:**

Please amend the claims as follows:

1. **(Currently Amended)** A method of ~~signal transmission~~, comprising overlapping a plurality of direct-sequence spread-spectrum signals using carrier frequencies that are orthogonally spaced relative to an integral multiple of a bit rate rather than a chip rate
2. **(Original)** A method of claim 1, further comprising common frequency-hopping encoding said plurality of direct-sequence spread-spectrum signals.
3. **(Original)** The method of claim 1, further comprising individual, differential frequency-hopping encoding each of said plurality of direct-sequence spread-spectrum signals.
4. **(Original)** The method of claim 1, wherein the frequency-hopping modulation is performed in a continuous-phase manner.
5. **(Original)** The method of claim 1, further comprising time-hopping encoding said plurality of direct-sequence spread-spectrum signals.
6. **(Original)** The method of claim 5, further comprising frequency-hopping encoding said plurality of direct-sequence spread-spectrum signals.
7. **(Original)** The method of claim 1, wherein overlapping includes synchronously allocating each of a plurality of users to one of a plurality of orthogonal channels.

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8. (Currently Amended) The method of claim 1, wherein overlapping includes encoding a frequency shift in a subset of bits that ~~compose~~ define a code word.

9. (Currently Amended) The method of claim 1, wherein overlapping includes establishing a bit- clock synchronization; and  
further comprising multiplying an incoming signal by an estimate of a desired signal; and integrating a product over an integral multiple of a bit period rather than a chip rate

10. (Original) The method of claim 1, further comprising retransmitting one of said plurality of direct-sequence spread-spectrum signals.

11. (Original) The method of claim 1, further comprising checking one of said plurality of direct-sequence spread-spectrum signals with an error-correcting code.

12-14. (Canceled)

15. (Currently Amended) A computer program, comprising computer- or machine-readable program elements translatable for implementing a the method of claim 1 signal transmission including overlapping a plurality of direct-sequence spread-spectrum signals using carrier frequencies that are orthogonally spaced relative to an integral multiple of a bit rate rather than a chip rate.

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16-24. (Canceled)

25. (Currently Amended) A computer program comprising computer program means adapted to perform the steps of overlapping a plurality of direct-sequence spread-spectrum signals using carrier frequencies that are orthogonally spaced relative to an integral multiple of a bit rate when said program is run on a computer rather than a chip rate

26. (Original) A computer program as claimed in claim 25, embodied on a computer-readable medium.

27. (Cancel)

28. (Currently Amended) A The method of claim 27 comprising, providing a direct-sequence spread-spectrum communication system that increases a number of users by utilizing a plurality of closely spaced orthogonal carriers that produce overlapping spectra, wherein a spacing of the plurality of orthogonal carriers is based on a ~~symbol~~ bit rate and not a chip rate.

29. (Original) The method of claim 28, further comprising frequency-hopping encoding the overlapping spectra.

30. (Original) The method of claim 28, further comprising time-hopping encoding the overlapping spectra.

31. (Original) The method of claim 30, further comprising frequency-hopping encoding the overlapping spectra.

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32. **(Currently Amended)** A method ~~of signal transmission~~, comprising overlapping a plurality of synchronous direct-sequence spread-spectrum signals using carrier frequencies that are orthogonally spaced relative to integral sub-multiples of at least one bit rate rather than a chip rate.

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Concl*  
33. **(Original)** The method of claim 32 wherein the plurality of synchronous direct-sequence spread-spectrum signals are overlapped relative to an integral sub-multiple of a common bit rate.

34. **(Currently Amended)** A method ~~of signal transmission~~, comprising overlapping a plurality of synchronous direct-sequence spread-spectrum signals using carrier frequencies that are orthogonally spaced relative to one-half of a bit rate rather than a chip rate

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